

ABSTRACT OF THE DISCLOSURE

A variable gain amplifier includes a current path control circuit which controls a path of a current flow through an amplifying transistor section, so as to control the actual size of transistors which make up the amplifying transistor section, and thereby control the gain and IIP3 (third-order Input Intercept Point). When the size W/L of the transistors is decreased or increased under constant current level maintained in a current path control circuit in the circuit, the transconductance (gain) is decreased or increased and the IIP3 is increased or decreased. According to this principle, there is provided a variable gain amplifier with a small mount area, capable of compensating for a decrease of the gain by an increase of the IIP3.

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